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Notice of Allowability

Application No.

09/683,429

Examiner

Dmitry Levitan

Applicant(s)

BENAYOUN ET AL.

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/29/06.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☒ Other Attachment A.

Amendment, filed 6/29/06, has been entered.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Anthony J. Canale on 7/11/06.

Claims 1-13 have been amended per Attachment A.

Note. Claims have been amended for clarity.

Allowable Subject Matter

2. Claims 1-13 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7529. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Handwritten signature of Dmitry Levitan, consisting of stylized initials 'DL' followed by a cursive signature.

Dmitry Levitan
Examiner
Art Unit 2616

Attachment A.

1. (Currently Amended) Data transmission system having a plurality of Local Area Networks (LANs) interconnected by a hub including a plurality of LAN adapters respectively connected to the plurality of LANs, the data transmission system comprising:

a packet switch interconnecting the plurality of LAN adapters wherein a packet transmitted by any one of the plurality of LAN adapters to the packet switch includes a header containing at least ~~the address~~ an address of the adapter to which the packet is forwarded and two bytes in which the first byte contains an identification field (unicast, multicast) and the second byte contains a module address field when the packet switch comprises several packet switch modules, the packet switch includes a plurality of input ports and a corresponding plurality of output ports both being respectively connected to the plurality of LAN adapters, each pair of input port and output port defining a cross point;

the packet switch comprises:

a plurality of memory blocks, each memory block associated with one of said cross points for storing any data packet which is received from the input port corresponding to the cross point and which is to be forwarded to the output port corresponding to the cross point, and

a plurality of schedulers, each scheduler associated with one of said output ports for selecting ~~at each clock cycle~~ a memory block among all memory blocks corresponding to the output port and causing the memory block to forward the stored data packet to the output port when predetermined criteria are met.

2. (Original) Data transmission system according to claim 1, wherein the memory block located at each cross point of the switch module includes a data memory unit for storing at least a data packet and a first memory controller which determines from the header of the

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received data packet whether the packet is to be forwarded to the output port associated with the cross point and for storing the data packet into the data memory unit in such a case.

3. (Currently Amended) Data transmission system according to claim 2, wherein the memory block includes a header validation control block for determining whether the header of a data packet received from the input port contains ~~the address~~ an address of the output port associated with the cross point and the first memory controller which stores the data packet into the data memory unit if the header contains the address of the output port and for reading the data packet to forward it to the output port.
4. (Original) Data transmission system according to claim 3, wherein the scheduler sends a validation signal to the header validation control block to authorize the first memory controller to store the data packet into the data memory unit.
5. (Currently Amended) Data transmission system according to claim 4, further comprising an output data block connected to each output port which stores a data packet received from any memory block and transmits the data packet to the output port under ~~the control~~ control of the scheduler.
6. (Currently Amended) Data transmission system according to claim 5, wherein the output data block includes a data selection block which validates the data packet after receiving a validating signal from the scheduler, an output memory unit which stores the data packet and a second memory controller which ~~controls~~ controls the operation of storing the data packet into the output memory unit and the operation of reading the output memory unit for transmitting the data packet to the output port.
7. (Original) Data transmission system according to claim 6, wherein the packet switch includes a plurality of switch modules and wherein each down switch module includes for each output port an input expansion data block for buffering a data packet received from an expansion bus in connected to an up switch module and corresponding to the same output port as the output port of the down switch module.

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8. (Original) Data transmission system according to claim 7, wherein the input expansion data block includes an expansion memory unit which buffers the data packet received from the expansion bus in, a header validation block which determines whether the header of the data packet contains the address of the output port associated with the cross point, and a third memory controller which stores the data packet into the expansion memory unit and reads the expansion memory unit to forward the data packet to the output port of the down switch module.
9. (Original) Data transmission system according to claim 8, wherein the scheduler sends a validation signal to the header validation block to authorize the third memory controller to store the data packet into the expansion memory unit.
10. (Original) Data transmission system according to claim 1, wherein an overflow signal is sent by the memory block to the scheduler when the memory block overflows.
11. (Original) Data transmission system according to claim 10, further comprising an overflow bus to transport the data packet to the memory block corresponding to the output port that after the scheduler has prevented the data packet from being stored into the memory block which overflows and has selected and validated another memory block which does not overflow.
12. (Currently Amended) Data transmission system according to claim 10, further comprising a back-pressure mechanism which sends back-pressure signals to ~~input~~ the adapters to request the ~~input~~ adapters to reduce the flow of the data packets transmitted to the packet switch when ~~there is too much~~ overflow detected by each scheduler of the packet switch exceeds a pre-determined amount.
13. (Currently Amended) Data transmission system according to claim 12, further comprising an overflow mechanism adapted to receive overflow control signals from the schedulers of the packet switch ~~when there is too much overflow~~ and to transmit an overflow signal to the back-pressure mechanism.

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